POSC/CAESAR Reference Data Browser
User Guide

Content

1 Introduction

This document is the **user-guide** for the distributed version of the POSC/CAESAR Reference Data Browser, which have been made available for display and reporting of class instances of the POSC/CAESAR data model.

This version of the reference data browser, *Snapshot C/D*, is a read-only Microsoft-Access 2.0 version. It does not contain any data-entry or update facilities.

For basic knowledge and understanding of the data in this database, reference is made to the *Snapshot C/D* documentation for further explanations;
- Volume I : Main document
- Volume II : Data model diagrams and entity dictionary
- Volume III : Reference Data Library.

Volume III of the Snapshot C/D documentation is a report from the Reference Data Application.

2 Posc/Caesar Reference Data Browser Menu

Start the Class-library application from **MS-Access**, by opening the file : **REFDATA.MDB**
This will automatically display the **Main Menu**, as indicated in Figure 2-1 below.

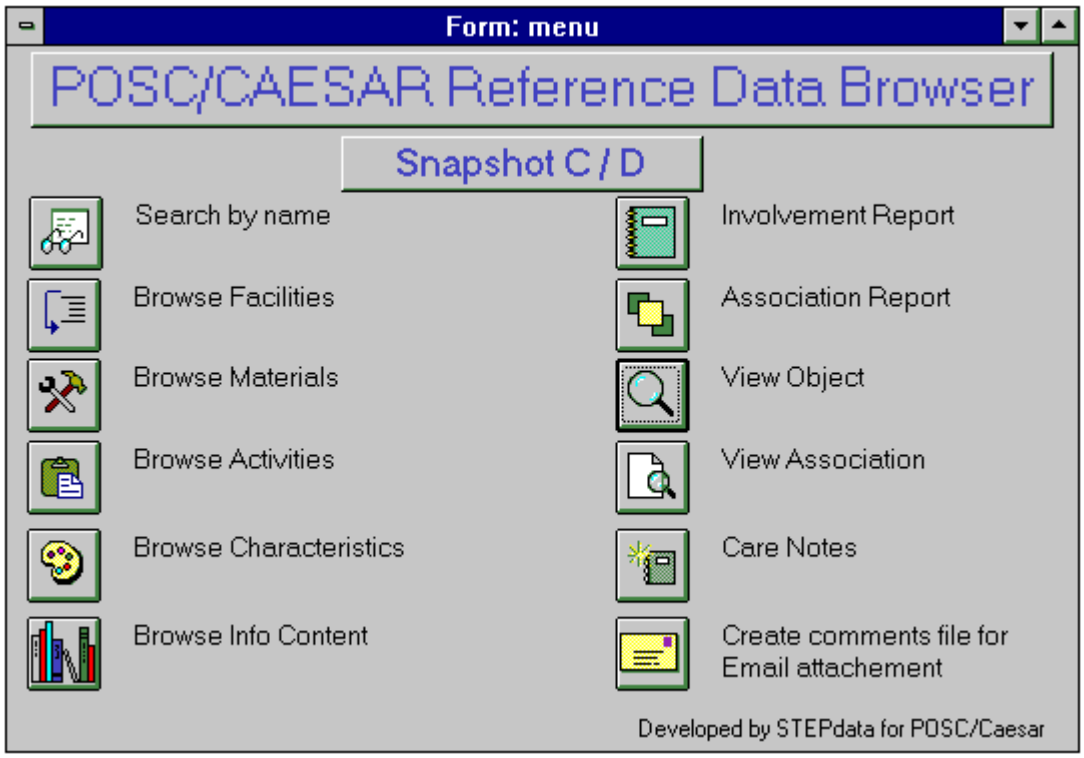


Figure 2-1 POSC/CAESAR Reference data library main menu

Valid **options** from the **Main-Menu** :

Search by Name : Search for any type of class
Browse Facility : Browse Facility class structure
Browse Material : Browse Material class structure
Browse Activity : Browse Activity class structure
Browse Characteristic : Browse Characteristic class structure
Browse Info Content : Browse Information Content class structure.
Involvement Report : Report involvement classes.
Association Report : Report any type of class with the corresponding associations
View Object : Display classes with the corresponding definition
View Association : Display classes with associations, e.g. class library structure
Care Notes : Information regarding application.
Create comments file to Email Attachment : Generate an ASCII file containing any comments done by the user.

These options will be explained in the following sections of chapter 2.

Example:

This chapter 2 of this user manual will guide you through the application using the Material Class 'VALVE' as an example.

a) How to search and display the description and details about a particular class

b) How to display related information to the class 'Valve'

- *Normal Properties related to a 'Valve'*
- *Normal Parts of a 'Valve'*
- *The classification structure of a 'Valve', show sub-classes of 'Valve', e.g. 'Globe valve'*
- *Normal connections, e.g. an 'Actuator'*

c) Report all information related to classes, to printer or screen.

2.1 Search by name

The '*Seach by name*' option, allow the user to search for any type of **class** instances in the *reference data library*. Currently the following type of class have been populated; Facility, Material, Activity, Characteristic, Involvement or Information Content classes.

Enter the search criteria in the 'Search for' field. Wildcards such as '*' and '?' may be used.
Press the **[-->]** button to start the search.

The search routine does not differ between lowercase and uppercase characters.

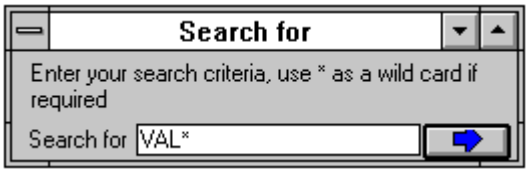


Figure 2-2 Enter Search criteria

The result from the search will be presented in a separate form, Fig.2-3.
Displaying the following information about class instances;
'*Type of class*', '*Class name*', '*Description*'.

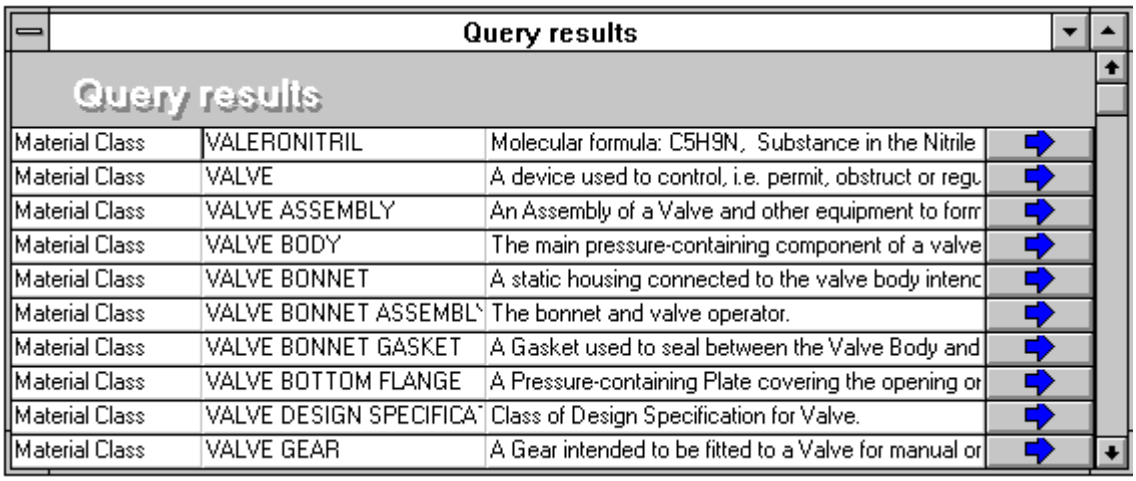


Figure 2-3 Query result from the search criteria.

Further information related to a particular class may be available. Press the **[-->]** button related to a particular class instance. A 'pop-up-menu' will be displayed on the screen, see fig 2-4.

The active class name will be displayed on the menu, e.g. ‘VALVE’ in the example.

Figure 2-4 Pop-up menu

Available options on the menu, following the icons from left to right:

- Classification : Shows the classification structure for current class, super and sub classes.
- Composition : Shows the ‘normal composition’ for current class
- Connection : Shows the ‘normal connection’ for current class
- Characteristics : Shows the ‘normal characteristics’ for current class
- Involvement : Shows the ‘involvements’ for current class.
- Show all : Shows all direct associations related to current class (inheritance not included)
- Close all : Close all forms
- Comments : Add a comment to a class. Enable the user to generate a report may be sendt to POSC/CAESAR project by email.

Some of these options will be shown below.

2.1.1 Classification.

In this exampel the classification option shows the classification structure for the VALVE. The upper form shows the direct super class of VALVE. The lower form shows the direct sub classes of VALVE.

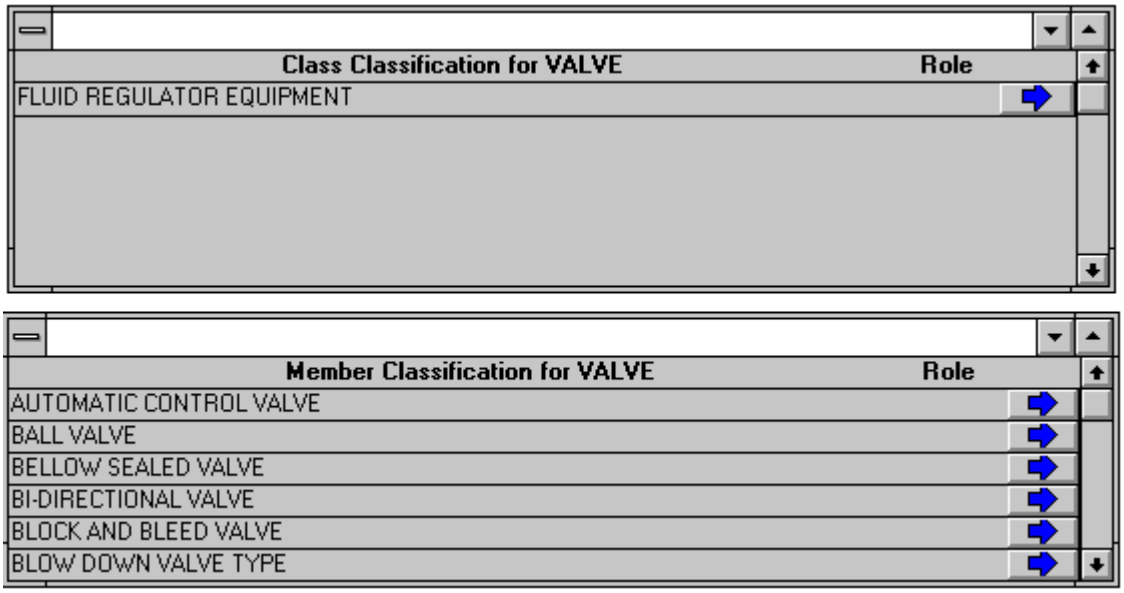


Figure 2-5 Classification structure.

Overview of the classification structure for the material class VALVE.

```
* MATERIAL CLASS
        * EQUIPMENT TYPE
                * FLUID EQUIPMENT
                        *FLUID REGULATOR EQUIPMENT
                                * VALVE
                                        *AUTOMATIC CONTROL VALVE
                                        *BALL VALVE
                                        * .....
```

2.1.2 Characteristics

The 'Characteristics option' will show instances of 'normal characteristics' related to VALVE. It will also show characteristics inherited from super classes. The example below shows that the only one characterisitc is related directly to the class VALVE, the other characteristics have been inherited from FLUID EQUIPMENT which is a super class of VALVE (see classification structure above).

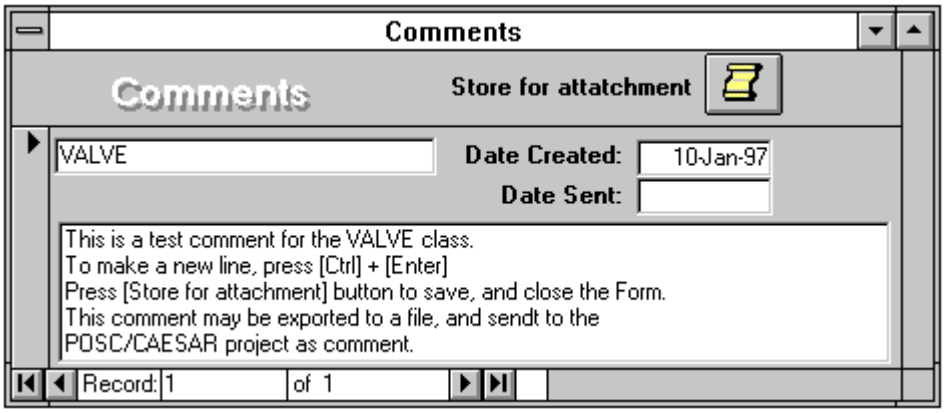
Characteristics	Inherited from
END TO END DIMENSION	VALVE
DRY WEIGHT	FLUID EQUIPMENT
MAXIMUM DESIGN TEMPERATURE	FLUID EQUIPMENT
MINIMUM DESIGN TEMPERATURE	FLUID EQUIPMENT
MAXIMUM OPERATING TEMPERATURE	FLUID EQUIPMENT
MINIMUM OPERATING TEMPERATURE	FLUID EQUIPMENT
MAXIMUM DESIGN PRESSURE	FLUID EQUIPMENT

Figure 2-6 Normal characteristics

2.1.3 Comments

This option allow the user to add comments to any classes within the class library.
The comments are stored in a table, which may be exported to a file. The intention with this export file is either to send it to the project by email, or print the file and send it by fax .

The 'Create comments file for Email attachment' option on the main menu is used to generate this file.



2.2 Browsers

From the main menu 5 browser options are available :

- Browse Facility classes
- Browse Material classes
- Browse Activity classes
- Browse Characteristic classes
- Browse Info Content. classes

All these browsers have the same functionality, and for demonstration we will use the Material Class Browser.

Select *Material Class Browser* from the main menu, which will display the form as shown in fig 2-7 below. The 'pop-up' menu will automatically be displayed.

'click' on the '**+**' in order to open a sub level (sub classes) of the classification structure.
'click' on the '**-**' in order to close a sub level of the classification structure.
'double click' on a class in order to set this as the 'active class'. The name of the active record is displayed in the 'pop-up' menu.

In fig 2-7 the user have pressed the '+' of EQUIPMENT TYPE, this will display the sub classes of this class. The '-' sign in front of the EQUIPMENT TYPE indicate that it have been 'opened'.

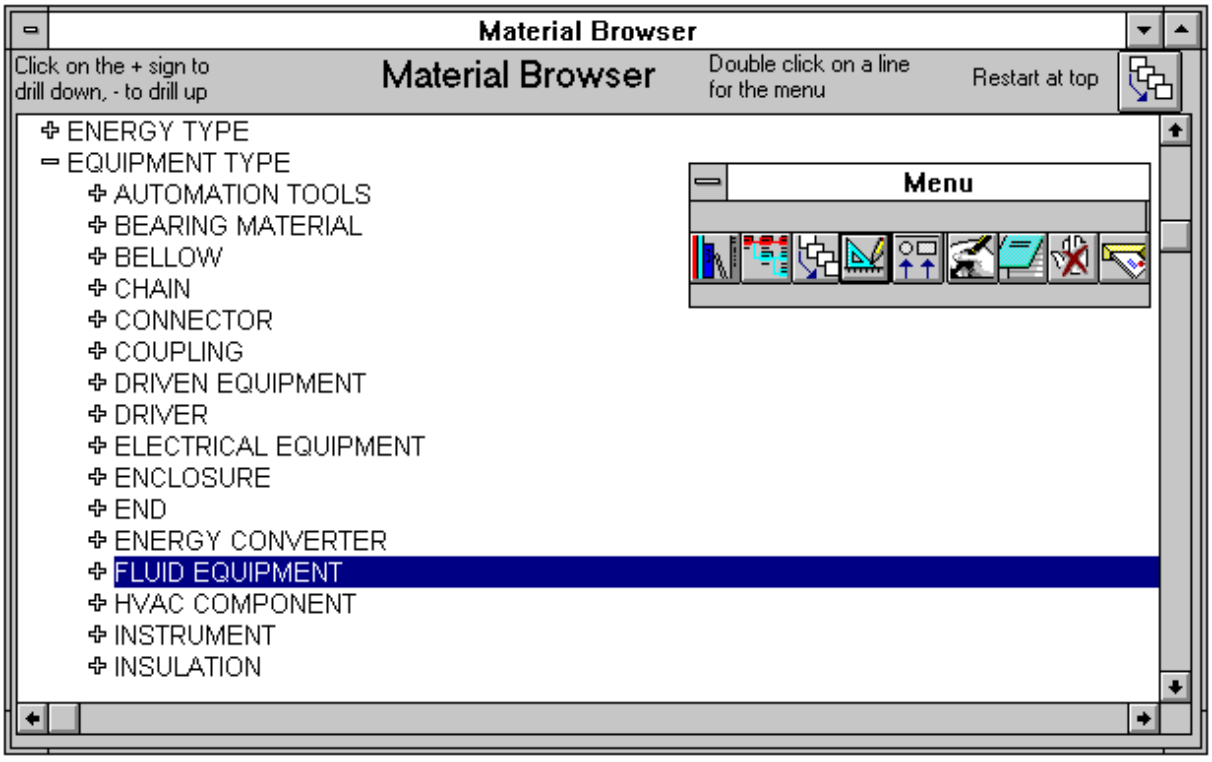


Figure 2-7 The Class browser shows the classification structure.

In the following example we will show how to drill down to the VALVE class.

‘double-click’ on the ‘VALVE’ line in order to set this record as active. The name of the active record is displayed in the ‘pop-up’ menu.

Select the options from the ‘pop-up’ menu. The options are the same as indicated in chapter 2.1.

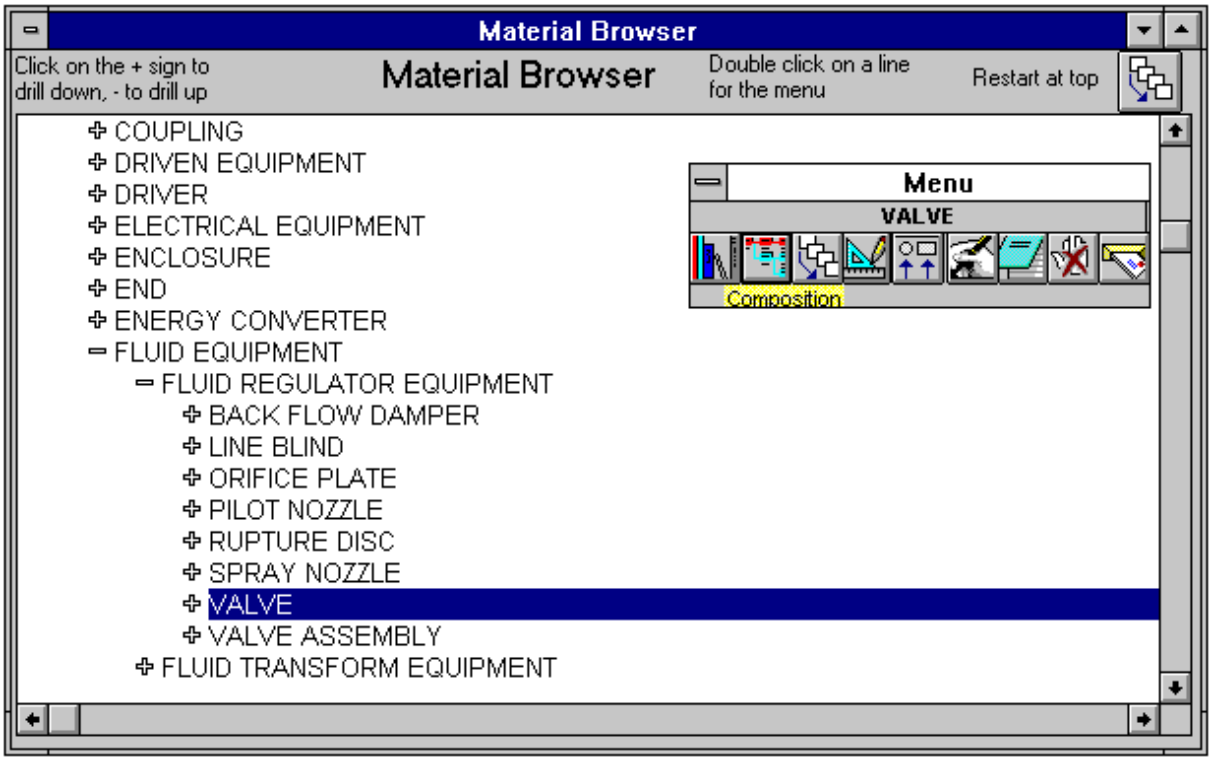


Figure 2-8 Set active class by double click on a line.

2.3 Object

The **Object** form; figure 2-9, is used in order to display main information about **class** instances. The form contains the following information :

- **Name**, (Name of the class)
- **Definition**, (Definition of the class)
- **Remarks,** (Remarks)
- **Label,** (a short term often used as name of the class by the industry)
- **Last Modification date,** (Last modified by Posc/Caesar)
- **User id** (Internal Posc/Caesar user identification)

How to display a class instance ?

1. Selecting the **Object type** (or type of class) in the *[Object List]*.
   Example: **'Material class'**
2. Select a class from the *[Object Instance List]*
   Use the *[Pattern]* field in order to filter which classes to display.

2.3.1 Select object type

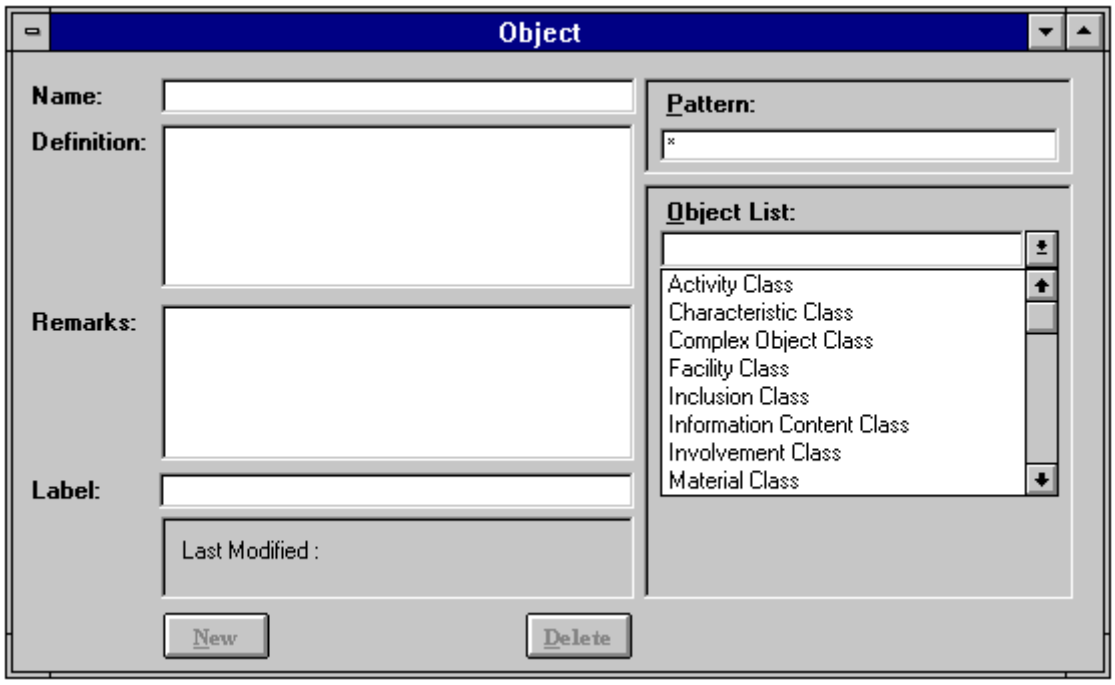


Figure 2-9 Select Entity type

2.3.2 Select object instance

- Select the class instance from the *[Object Instance List]*.

You may use the *[Pattern]* field in order to limit the number of classes in the *[Object Instance List]*.

> *Example:*
> *VA* , will display only classes starting with the letters VA with any number of characters.*
> *VA? , will display only classes starting with the letters VA.*

The default value of *[Pattern]* ; **'*'** list all object instances.

NB! If the *[Pattern]* field is <blank>, no objects will be displayed in the *[Object Instance List]*.

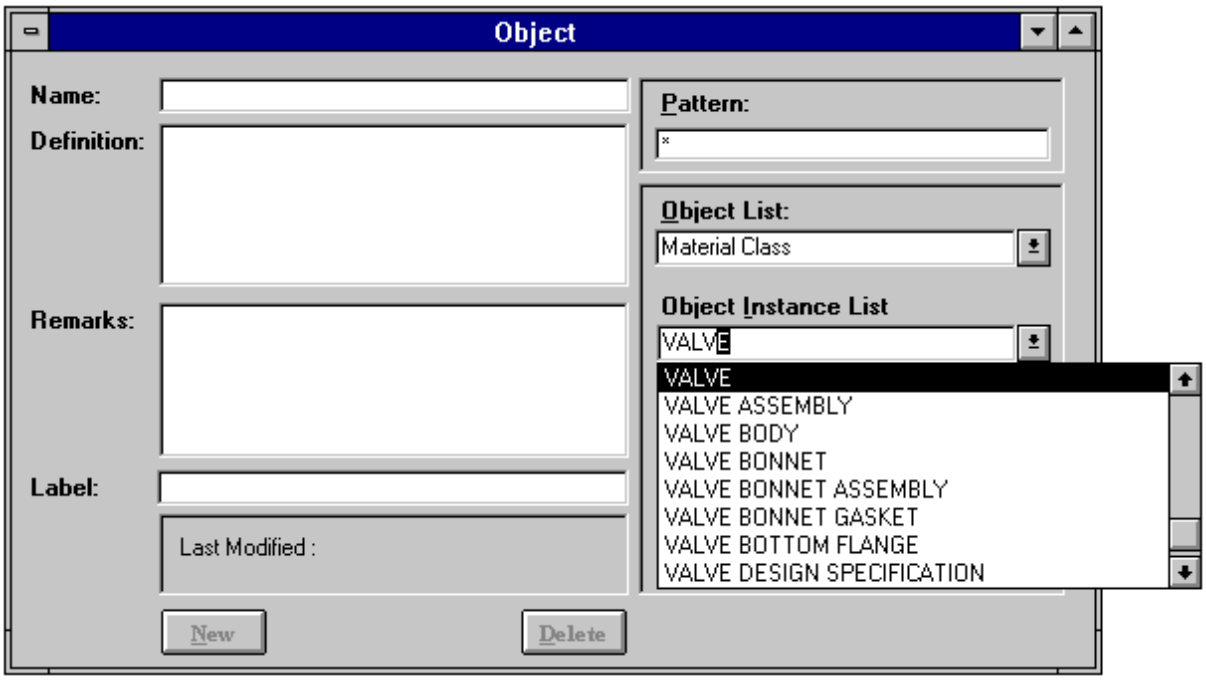


Figure 2-10 Select instance of entity to display, e.g. Material class; VALVE

Display object

Figure 2-11 show the Material Class ; 'VALVE' with the corresponding detailed information :

- Name (This name is unique within the Reference Data Library'
- Definition
- Remarks
- Label
- User id (Internal Posc/Caesar user identification)
- Modification date (Last modified by Posc/Caesar)

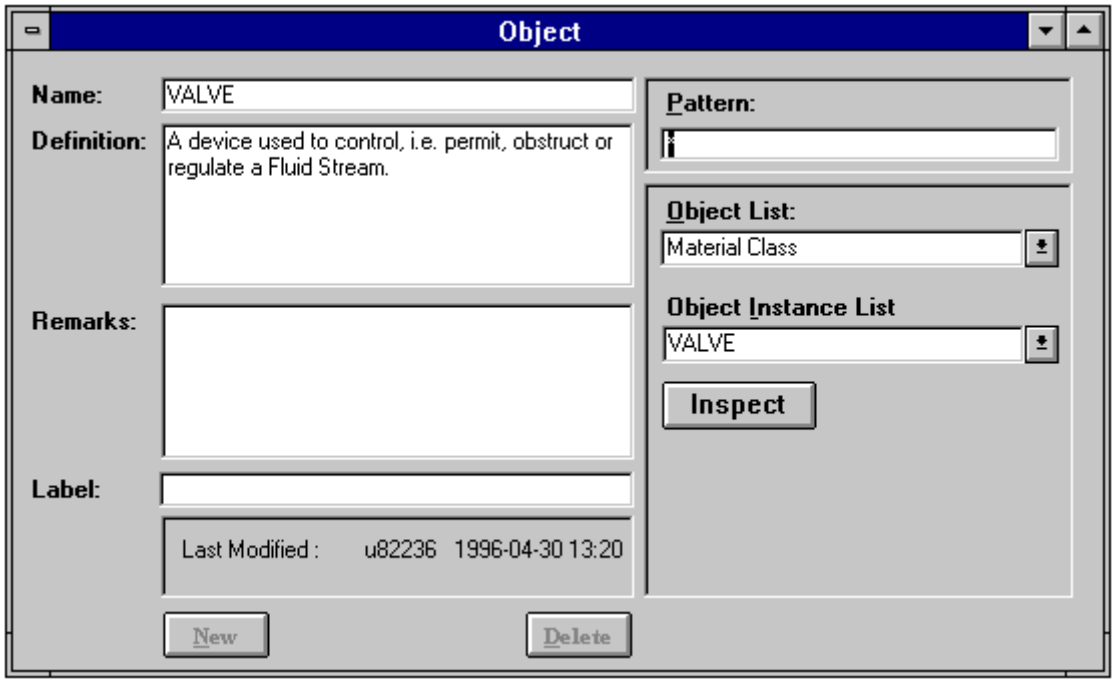


Figure 2-11 Display object

The **[New]** and **[Delete]** buttons are not available in the read-only version.

The **[Inspect]** button will display the report as indicated in figure 2-16, which shows all **associations** current object , 'VALVE', is involved in.

2.4 Associations

The **Association form** in figure 2-12, is used to display **association** instances of the data model. Ref. the data model in fig. 3-1 in chapter 3.

How to Display an Object with the corresponding Association.

1. Select an **Association** type, e.g. *'Material Class Classification'* in order to view the classification structure.
2. Select an **Object Type**, e.g. *'Material Class'*.
3. Select an **Object/Class instance**, e.g. *'VALVE'*.

2.4.1 Select an Association type

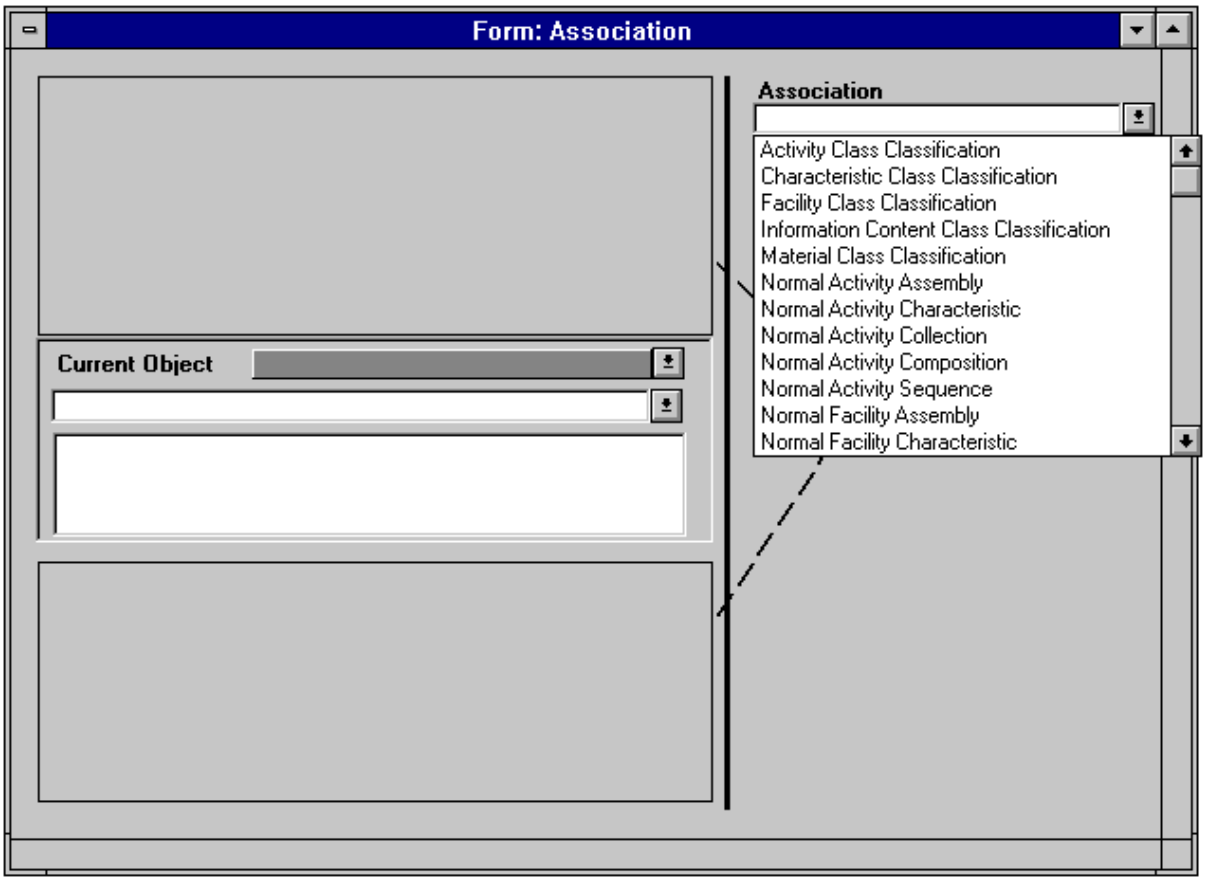


Figure 2-12 Select association type

The most relevant Associations related to **Material classes** are:

Association name in data-model	**Description**
Material class classification	Classification structure
Normal material characteristics	Characteristics (properties)
Normal material composition	Parts /Assembly
Normal material connection	Connections

2.4.2 Select Object type.

In order to view an object you have to select an ‘object type’ from the data-model. In the data model there are four valid choices related to the ‘Material Class Classification’ association :

- ‘Thing’
  - ‘Object’
    - ‘Class Object’,
      - ‘Material Class’.

In the data model terminology the ‘Material Class’ is a sub-type of ‘Class Objects’ which is a sub-type of ‘Object’ which again is a sub type of ‘Thing’.

According to the data model ‘Thing’, ‘Object’ and ‘Class Object’ are ‘abstract entities’, and does not contain any instances. Only valid option in this example is to select the ‘**Material Class**’

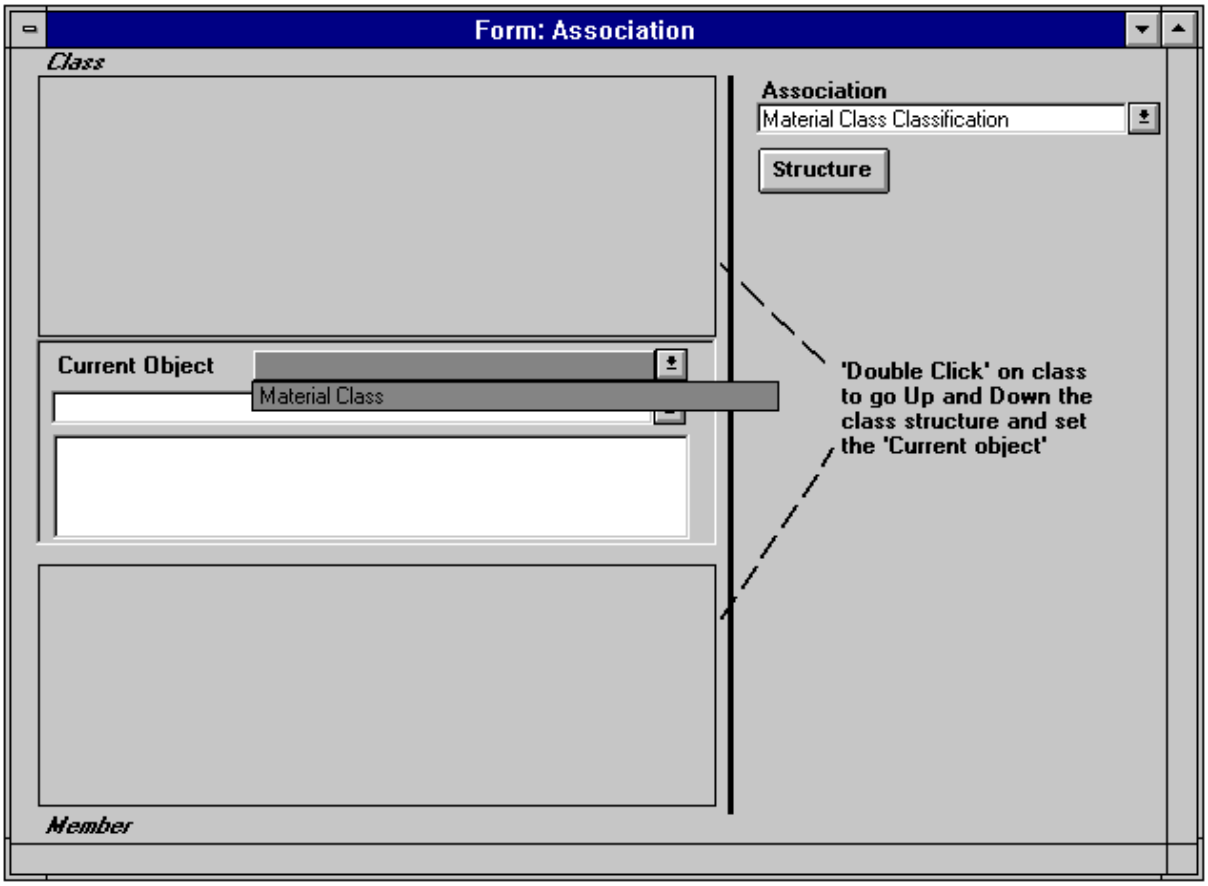


Figure 2-13 Select object type

2.4.3 Select Object/class instance.

Select the Material Class : **'VALVE'**.
Start typing '**VA**' in the field, and the system will start listing classes stating with the letters 'VA'.

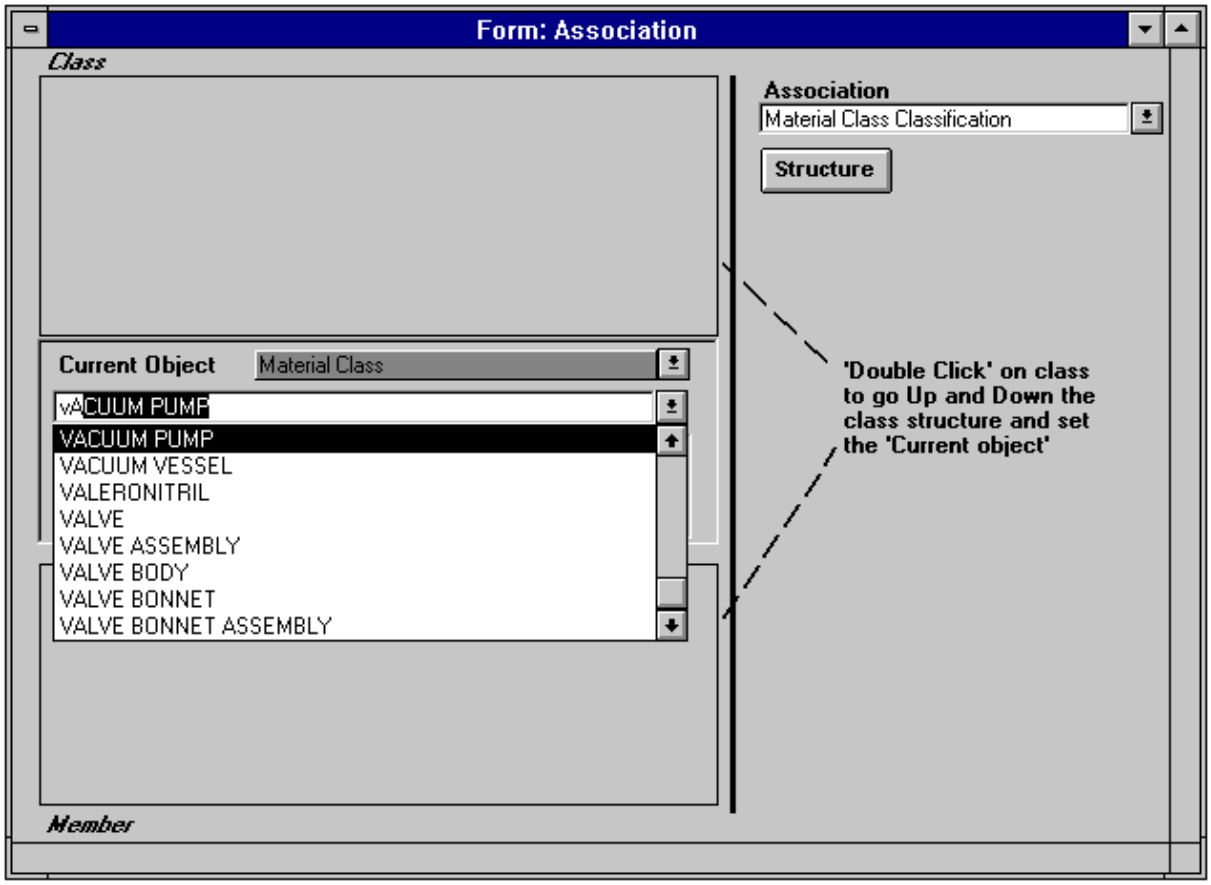


Figure 2-14 Select object instance

Display the object and the corresponding association.

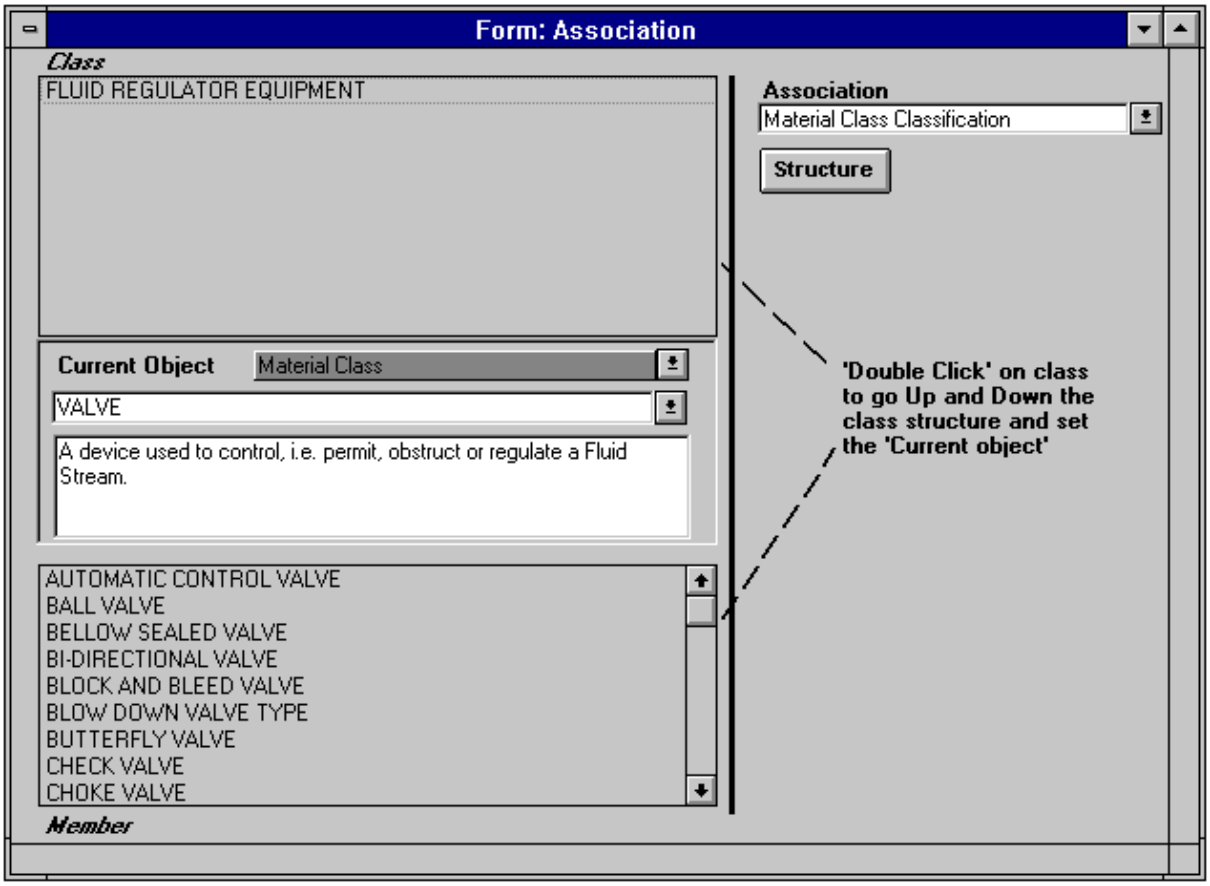


Figure 2-15 Display object with corresponding associations.

Traversal of the hierarchy :

You may 🖱 'double-click' in any of the classes above or under the [Current Object] in order to traverse the class hierarchy up or down. E.g. 🖱 'double-click' on the BALL VALVE class, will set the BALL VALVE as the [Current Object] and set VALVE as the 'super-class' and list sub-classes below, if applicable.

The **[Structure]** button will start a report which show the whole classification structure from 'Current object'. All super classes and sub classes will be displayed, as indicated in fig. 2-16.

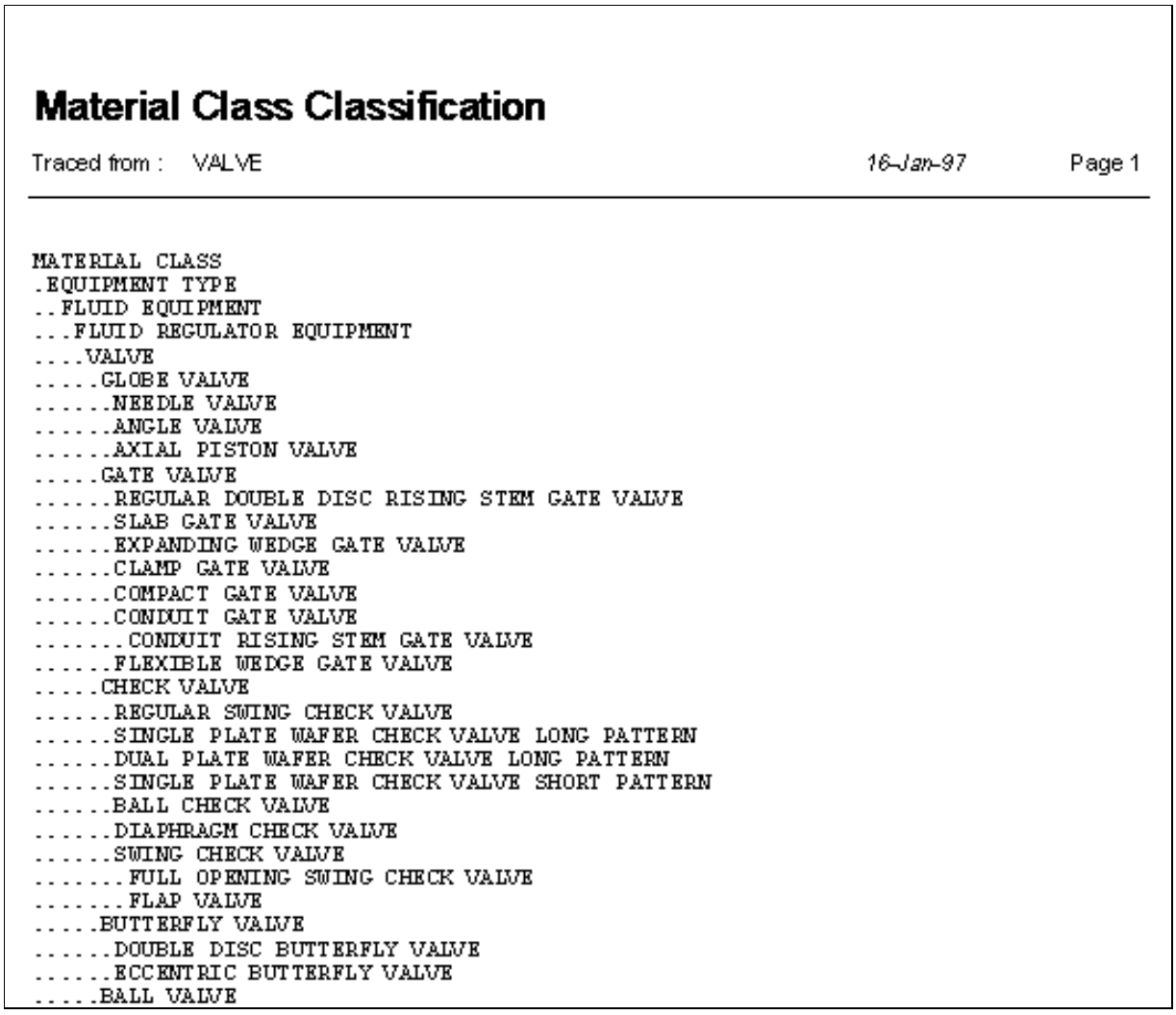
2.4.4 Structure Report

Press the **[Structure]** button in the '**Association**' form to display the report below.

This option is only available for the 'Classification' associations.
- Facility Class Classification
- Material Class Classification
- Activity Class Classification
- etc..

in order to display the classification structure of the class library.

The report will display all super- and subclasses of 'current class' ; VALVE.



Material Class Classification

Traced from : VALVE 16-Jan-97 Page 1

```
MATERIAL CLASS
.EQUIPMENT TYPE
..FLUID EQUIPMENT
...FLUID REGULATOR EQUIPMENT
....VALVE
.....GLOBE VALVE
......NEEDLE VALVE
......ANGLE VALVE
......AXIAL PISTON VALVE
.....GATE VALVE
......REGULAR DOUBLE DISC RISING STEM GATE VALVE
......SLAB GATE VALVE
......EXPANDING WEDGE GATE VALVE
......CLAMP GATE VALVE
......COMPACT GATE VALVE
......CONDUIT GATE VALVE
.......CONDUIT RISING STEM GATE VALVE
......FLEXIBLE WEDGE GATE VALVE
.....CHECK VALVE
......REGULAR SWING CHECK VALVE
......SINGLE PLATE WAFER CHECK VALVE LONG PATTERN
......DUAL PLATE WAFER CHECK VALVE LONG PATTERN
......SINGLE PLATE WAFER CHECK VALVE SHORT PATTERN
......BALL CHECK VALVE
......DIAPHRAGM CHECK VALVE
......SWING CHECK VALVE
.......FULL OPENING SWING CHECK VALVE
.......FLAP VALVE
.....BUTTERFLY VALVE
......DOUBLE DISC BUTTERFLY VALVE
......ECCENTRIC BUTTERFLY VALVE
.....BALL VALVE
```

Figure 2-16 Object structure report

2.5 Report; Association

1. Select selection criteria
   - Mandatory (fig.12):
     Select Object type / Class type to report (Mandatory choice)
   - Optional (fig.13):
     Select Classes either by ‘Name’, by ‘user-id’ or by ‘last modification date’
   - Press [Select] in order to execute the selection.

2. Select which fields to display in the report
   - ‘Label’, ‘Description’, ‘Remarks’, ‘User ID’, ‘Last Modification date’

3. Select which associations to report :
   - ‘Classification’, ‘Composition’, Normal Composition’, ‘Normal Connections’
   - ‘Normal properties’

4. Press [Report] button to display/print the report.

Select ‘Object’ type ; e.g. material class

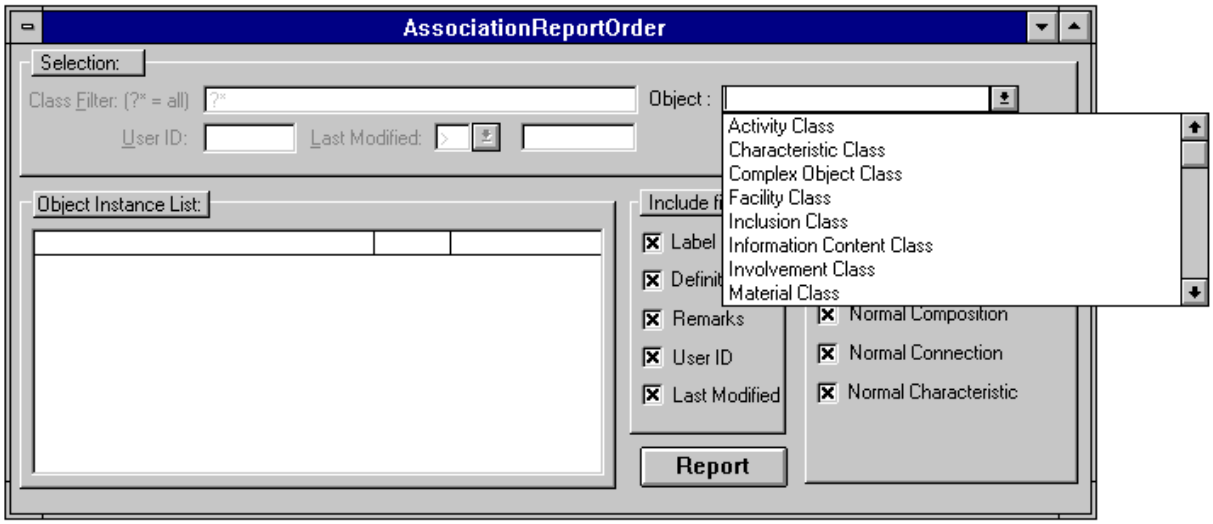


Figure 2-17 Selection criteria for the Association report.

Select Classes,
Sub-set of classes may be specified using the 'Class Filter' field.
e.g. 'V*' in order to list all classes starting with letter 'V'

- **?** replace one character
- ***** replace any number of characters.

Press the **[Select]** button in order to execute your selection/filter.
This will result in the 'Object Instance List' as indicated below.

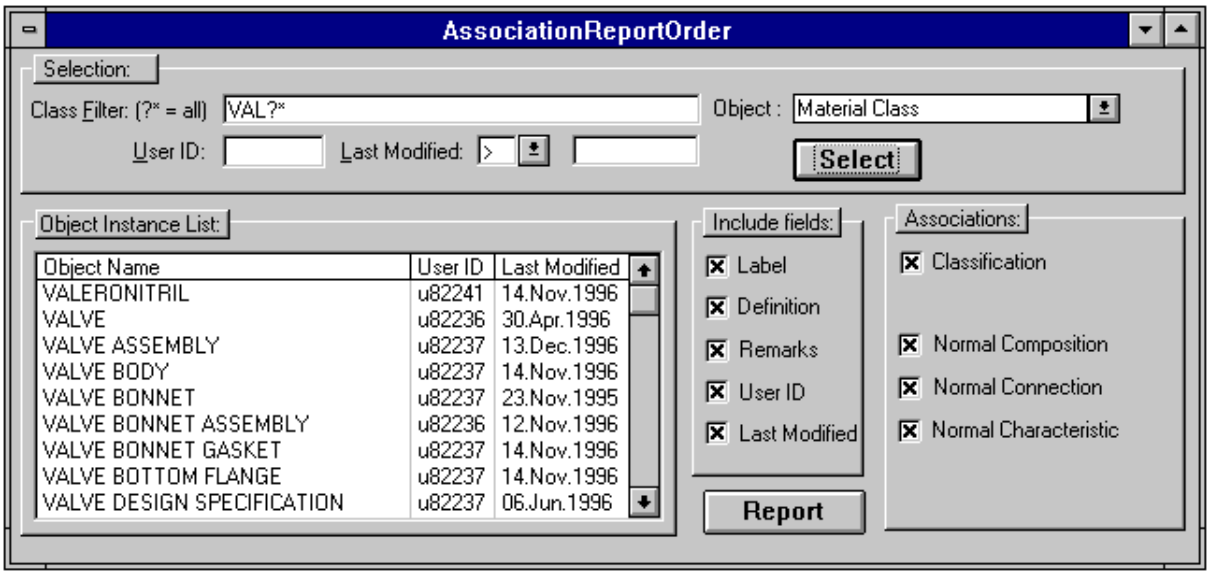


Figure 2-18 Association report

Include fields and **Associations** options.
By default all fields and all associations are set to ON. In this example we keep all options on.

The more associations which are set to ON the longer time the report will take to run ! The speed of the report is dependent of available memory and type of PC processor.

RUN THE REPORT

- Press the **[Report]** button in order to run the report of all classes which is included in the list, as a result of the selection criteria.

- You may 🖱 'double-click' in any of the classes in order to generate a report for a single class.

  Both options will result in a Print-Preview on screen (see next page). This report could then be printed, either the whole document, or only part of it.

Select the Printer icon in order to print the whole report or parts of the report.

Material Class Report

Material Class Report

VALVE

(Last Modified 30.4.96 by: u82236)

Label:
Definition: A device used to control, i.e. permit, obstruct or regulate a Fluid Stream.
Remarks:

Super Classes:

```
MATERIAL CLASS
.EQUIPMENT TYPE
..FLUID EQUIPMENT
...FLUID REGULATOR EQUIPMENT
....VALVE
```

Sub Classes:

```
VALVE
.GLOBE VALVE
..NEEDLE VALVE
..ANGLE VALVE
..AXIAL PISTON VALVE
.GATE VALVE
..REGULAR DOUBLE DISC RISING STEM GATE VALVE
..SLAB GATE VALVE
..EXPANDING WEDGE GATE VALVE
..CLAMP GATE VALVE
..COMPACT GATE VALVE
..CONDUIT GATE VALVE
...CONDUIT RISING STEM GATE VALVE
..FLEXIBLE WEDGE GATE VALVE
.CHECK VALVE
..REGULAR SWING CHECK VALVE
..SINGLE PLATE WAFER CHECK VALVE LONG PATTERN
..DUAL PLATE WAFER CHECK VALVE LONG PATTERN
..SINGLE PLATE WAFER CHECK VALVE SHORT PATTERN
.
.
```

Normally Part of:

```
CONTROL VALVE
COOLING UNIT
DRAG VALVE
FLOAT VALVE
IGNITION UNIT
```

Normal Parts: <none>

Normal Connections :

ACTUATOR	VALVE

Normal Properties:

END TO END DIMENSION	VALVE
DRY WEIGHT	FLUID EQUIPMENT
MAXIMUM DESIGN PRESSURE	FLUID EQUIPMENT
MAXIMUM DESIGN TEMPERATURE	FLUID EQUIPMENT
MAXIMUM OPERATING PRESSURE	FLUID EQUIPMENT
MAXIMUM OPERATING TEMPERATURE	FLUID EQUIPMENT
.....	

2.6 Report; Involvement

This report currently list all defined Involvement instances.

Normal involvement report

16-Jan-97

Activity Class	Involvement Class	Class Object
AUTHORISE	AUTHORISEABLE	ACTIVITY CLASS
AUTHORISE	AUTHORISEABLE	CHARACTERISTIC CLASS
AUTHORISE	AUTHORISEABLE	FACILITY CLASS
AUTHORISE	AUTHORISEABLE	INFORMATION CONTENT CLASS
AUTHORISE	AUTHORISEABLE	MATERIAL CLASS
AUTHORISE	PURPOSE	ACTIVITY CLASS
CONTROL AND APPROVE ACTIVITIES	BASIS	CHANGE REQUEST
CONTROL AND APPROVE ACTIVITIES	BASIS	OWNER REQUIREMENTS
CONTROL AND APPROVE ACTIVITIES	BASIS	SITE INFORMATION
CONTROL AND APPROVE ACTIVITIES	BASIS	STATUS
CONTROL AND APPROVE ACTIVITIES	CONTROLLER	BUSINESS DIRECTIVES
CONTROL AND APPROVE ACTIVITIES	CONTROLLER	CODES

Figure 2-19 Involvement report.

2.7 Create comments file for Email attachment.

This option is used to generate a report file of the comments made to any class instance in the library.

The following options are available :
- Include all comments :
  This option will make a report of all comments stored in the data base, and set a switch on all reported items to ‘Export date’
- Include only comments not sent previously.
  This option will make a report of the comments which have not been previously sent, i.e. ‘Export date’ = Null

- Output filename :
  Default filename is C:\PC_EMAIL.TXT
  If the file already exist, this will be indicated in read text ‘ File already exist’
  If you do not want to overwrite the existing file, enter a new name.

Press **[V]** button to accept the options, and start generation of the export file.
Press **[X]** button to cancel the Export.

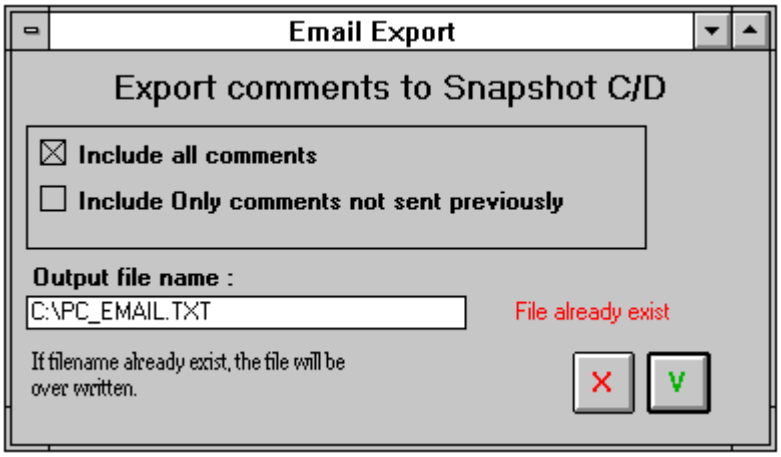


Figure 2-20 Export comments

The Export file, PC_EMAIL.TXT may be sent to the POSC/CAESAR project by email, or a printout of this file may be sent by fax.

3 APPENDIX A : Data model subset.

Fig. 3.1 below show an a diagram of a sub-set of the *POSC/CAESAR data model.* The diagram show the *Material class* entity and the valid associations, which have been used as the example throughout this user guide.

The total data model is described in Volume II of the *POSC/CAESAR Snapshot C/D* documentation.

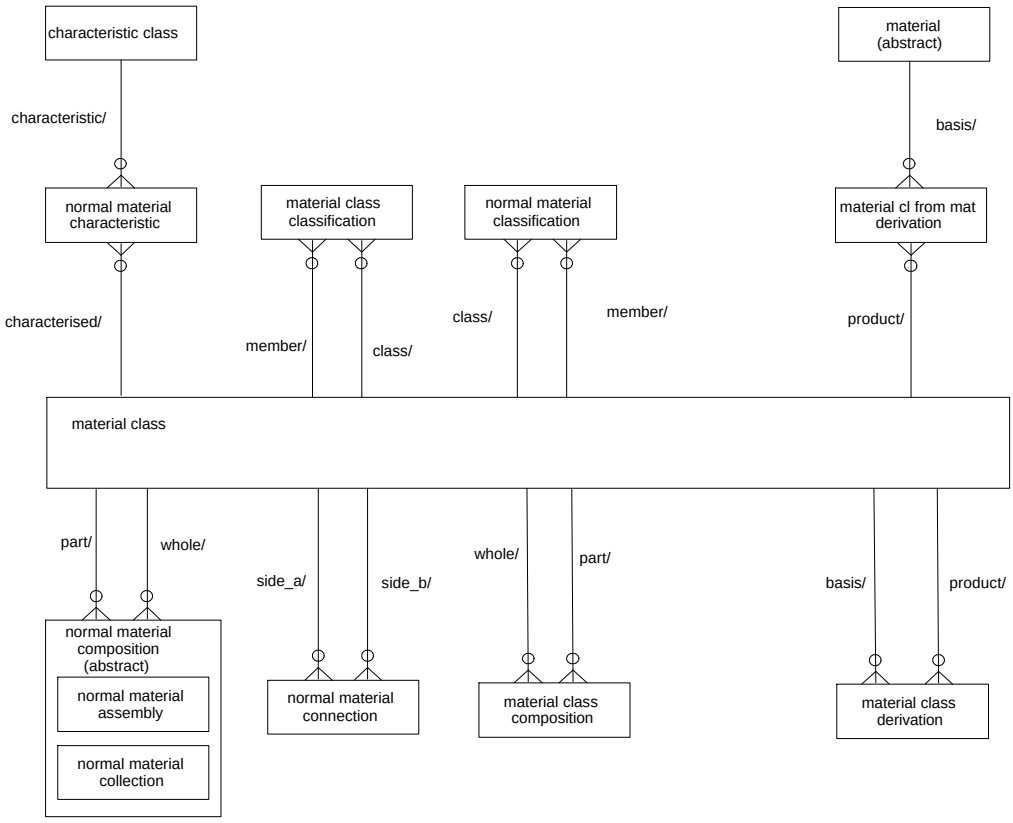


Figure 3-1 Data model of Material class